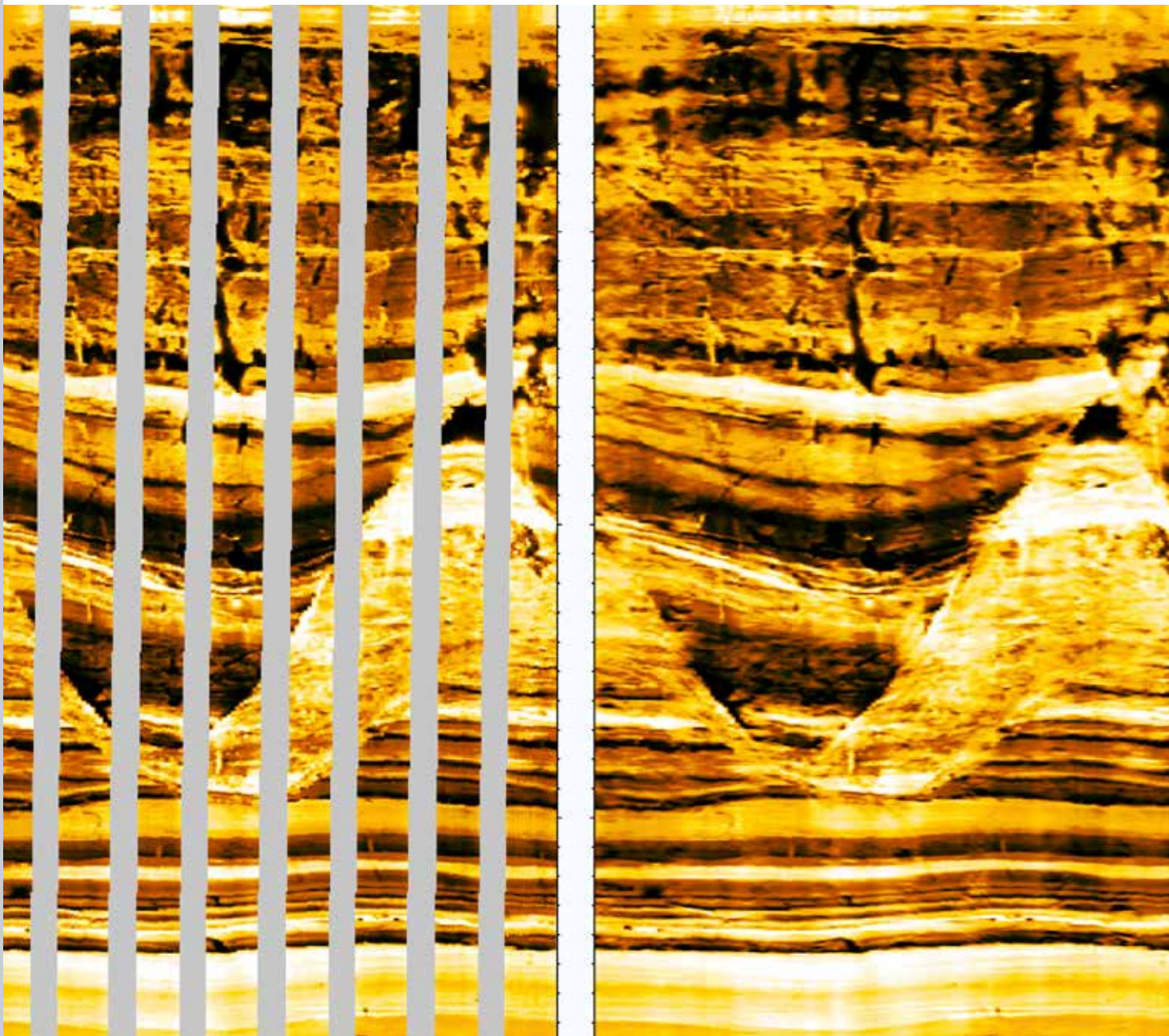




**Weatherford<sup>®</sup>**

## Reveal 360<sup>™</sup> Image Processing and Services

Delivering 360-degree wellbore imaging

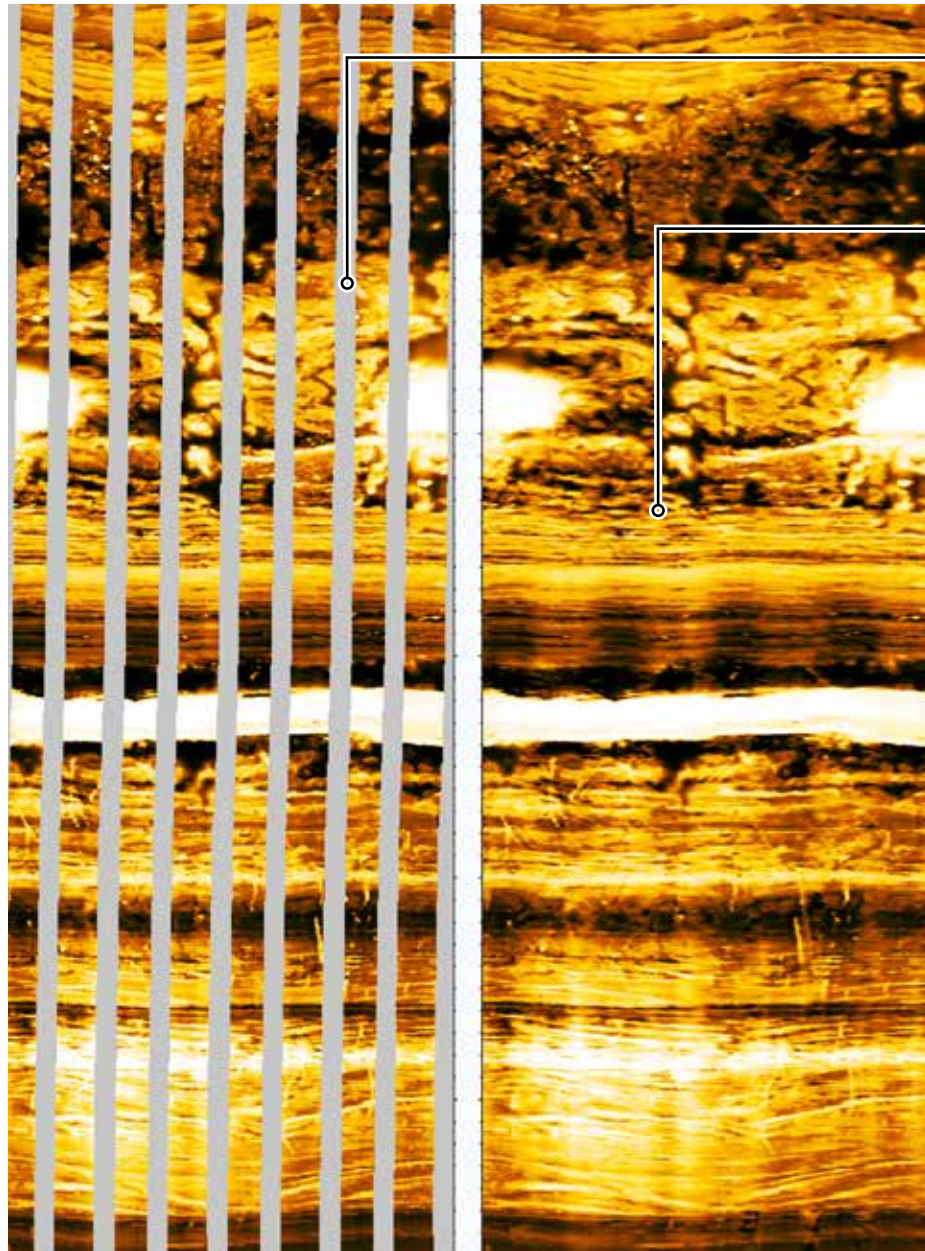


# Get the full picture with Reveal 360™ services

## Remove the blind spots from your wellbore images

You depend on wellbore images to provide detailed structural, stratigraphic, and depositional information. But even using the most advanced imaging tools, you may only see between 50 and 70 percent of your wellbore. The rest is missed because of gaps between the pads of the wireline tool.

Reveal 360 image processing gives you a complete picture of your wellbore regardless of bit size. Our patented new processing technique reconstructs gaps in wireline logging images, replacing missing data with values consistent with the structural and textural information in the measured parts of the image. Even in clastic rock formations with a wide variety of sedimentary and structural features, the technique produces images that are nearly identical to full-coverage images.



## Reveal 360 versus measured full-coverage data

The Reveal 360 method was tested against full-coverage data in wells that were dominated by curvilinear features. The wells were artificially obscured to simulate partial coverage.

8 1/2-in. well-image reconstruction is

**96%**  
**accurate**

for 30% coverage loss

12 1/4-in. well-image reconstruction is

**92%**  
**accurate**

for 50% coverage loss

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## Standard

Gaps between the pads of wireline tools provide images in which 30 to 50 percent of your wellbore data is missing.

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## Reveal 360

Our patented processing technique environmentally normalizes the image and then removes the gaps between pads, which provides a complete view of the wellbore.

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### The Reveal 360 Advantage

- Delivers 360-degree well imaging with no blind spots
- Provides unbiased and reproducible estimates of the nonmeasured parts of images
- Enables automated pattern recognition algorithms that are typically challenged by gaps in data
- Reconstructs a broad range of attributes including partial and full sinusoids and textural elements
- Offers compatibility with all Weatherford Compact™ and standard wireline wellbore imaging tools
- Provides accurate imaging for all features with dip angles up to 80 degrees

## Reveal 360 Answer Product

Through the Petroleum Consulting portfolio of Answer Products, we combine the technical expertise and experience of our consultants with the intellectual property of our R&D department. Together, these integrated interpretive and consulting services reduce reservoir uncertainty.

Our expert consultants can guide you to a thorough understanding of your well using the Reveal 360 image processing technique. Working around the globe in more than 30 countries, our staff of 350 petroleum consultants can apply their expertise and experience to your assets, transforming high-resolution wellbore images into measureable gains in oil and gas production.

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## We offer comprehensive wireline services

Our Compact and standard suite of wireline tools give you an unmatched access to your well. These tools can be configured for a minimum hole diameter of 2.9 in. (74 mm) and are available in ten conveyance methods, giving you reliable options in otherwise impossible-to-log situations.

Using the combined capabilities of our tools and Reveal 360 image processing and services, we can reveal the full potential of your wireline images.

### Increased production by

# 40% in 180 days

using Compact Micro-Imager data

# How the Reveal 360 technique works

Reveal 360 processing decomposes the measured sections of the wellbore into sparse representations of their morphological components using dictionaries of multi-scale,

multi-orientation transforms—a technique known as morphological component analysis. These representations are then reconstructed using information from the dictionaries to fill in missing information.

Our expert consultants can guide you to a thorough understanding of your well using the Reveal 360 image processing technique. To learn how our services and technologies can work for you, contact [consulting@weatherford.com](mailto:consulting@weatherford.com), or visit us at [weatherford.com](http://weatherford.com).



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